

Listing of Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Previously Presented) A self-pointing antenna comprising:
an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and
a single actuator operatively coupled with said support struts for permitting movement of said support struts for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.
2. (Original) The antenna of claim 1 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.
3. (Original) The antenna of claim 2 wherein said actuator is mounted to a top side of said boom arm.
4. (Original) The antenna of claim 2 wherein said actuator is mounted to a bottom side of said boom arm.
5. (Original) The antenna of claim 2 wherein said actuator comprises an automotive mirror-glass actuator.
6. (Original) The antenna of claim 1 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.

7. (Original) The antenna of claim 6 wherein said actuator is mounted to said boom arm.
8. (Original) The antenna of claim 6 wherein said actuator is mounted to said reflector.
9. (Cancelled)
10. (Previously Presented) In an antenna structure, a method of self-directing a main beam axis of said antenna structure, said method comprising:
 - supporting a feed on an elongated boom arm coupled to said reflector;
 - supporting said boom arm by a pair of support struts extending between said reflector and said boom arm; and
 - adjusting an effective length of one or both of said support struts by providing a single actuator to thereby adjust the position of said feed relative to said reflectors so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna.
11. (Previously Presented) The method of claim 10 wherein said adjusting comprises mounting said actuator to said boom arm and support struts.
12. (Original) The method of claim 11 wherein said actuator is mounted to a top side of said boom arm.
13. (Original) The method of claim 11 wherein said actuator is mounted to a bottom side of said boom arm.
- 14 -23 (Cancelled)

24. (Previously Presented) A self-pointing antenna comprising:
an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and
a single actuator placed in a single location operatively coupled with said support struts for permitting movement of said support struts and/or said boom arm for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.
25. (Original) The antenna of claim 24 wherein said actuator connects said boom arm to said support struts and by rotation of the actuator causes the angle between the struts and boom arm to be adjusted.
26. (Original) The antenna of claim 25 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.
27. (Original) The antenna of claim 26 wherein said actuator is mounted to a top side of said boom arm.
28. (Original) The antenna of claim 27 wherein said actuator is mounted to a bottom side of said boom arm.
29. (Original) The antenna of claim 26 wherein said actuator comprises an automotive actuator.
30. (Original) The antenna of claim 24 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.

31. (Original) The antenna of claim 30 wherein said actuator is mounted to said boom arm.
32. (Original) The antenna of claim 30 wherein said actuator is mounted to said reflector.
33. (Cancelled)
34. (Previously Presented) A self-pointing antenna comprising:
a reflector, a feed, a sub-reflector, and a plurality of support struts coupled between said reflector and said sub-reflector and supporting said sub-reflector; and
a single actuator for adjusting the position of said sub-reflector relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.
35. (Previously Presented) The antenna of claim 34 wherein said actuator is mounted to said sub-reflector and comprises a two-axis actuator.
36. (Currently Amended) The antenna of claim 34 wherein said actuator is mounted to said ~~one~~ sub-reflector.
37. (Original) The antenna of claim 34 wherein said actuator comprises a two-axis motorized carriage.
38. (Original) The antenna of claim 36 wherein said actuator comprises a two-axis motorized carriage.
39. (Original) The antenna of claim 34 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

40. (Previously Presented) The antenna of claim 39 wherein said actuator is mounted to said sub-reflector.

41. (Cancelled)

42. (Original) The antenna of claim 34 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

43. (Original) The antenna of claim 39 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

44. (Currently Amended) In an antenna structure having a reflector, a feed and a sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a said sub-reflector by a plurality of support struts extending between said reflector and said sub-reflector; and

adjusting the position of said sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, wherein said adjusting comprises operating a single actuator mounted to said sub-reflector and said support struts.

45. (Cancelled)

46. (Cancelled).

47. (Previously Presented) A self-pointing antenna comprising:
a reflector, a feed and a sub-reflector
means for supporting said sub-reflector operatively coupled to said reflector; and

means for adjusting the position of said sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, said adjusting means comprising a single actuator.

48. (Cancelled)

49. (Currently Amended) The antenna of claim 48 47 wherein said actuator is mounted to said sub-reflector.

50. (Currently Amended) The antenna of claim ~~48~~ 47 wherein said actuator comprises a two-axis motorized carriage.

51. (Original) The antenna of claim 49 wherein said actuator comprises a two-axis motorized carriage.

52. (Original) The antenna of claim 51 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

53. (Cancelled).

54. (Previously Presented) The antenna of claim 51 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

55. (Previously Presented) The antenna of claim 52 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

56. (Cancelled)

57. (Currently Amended) In an antenna structure having a reflector, ~~and one of a feed, and a sub-reflector,~~ a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting asaid sub-reflector by a plurality of support struts extending between said reflector and ~~said one of said feed and~~ said sub-reflector; and
adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting the position of said ~~one~~ both of said feed and said sub-reflector relative to said reflector.

58-60. (Cancelled)

61. (Currently Amended) In an antenna structure having a reflector, a feed and a sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting asaid sub-reflector by a plurality of support struts extending between said reflector and said sub-reflector; and
adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting the position of said sub-reflector relative to said reflector and by adjusting the position of said feed relative to said reflector.

62-64. (Cancelled)

65. (Original) The antenna of claim 34 wherein said single actuator is further adapted to adjust the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

66. (Currently Amended) The method of claim 44, wherein said antenna structure comprises both said feed and said sub-reflector and the method further comprises adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna.

67. (Currently Amended) The ~~method~~ antenna of claim 47, wherein said means for adjusting the position of said sub-reflector is further adapted to adjust the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

68. (Currently Amended) In an antenna structure, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a feed on an elongated boom arm coupled to said reflector;

supporting said boom arm by a pair of support struts extending between said reflector and said boom arm; and

adjusting either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna by adjusting a effective length of one or both of said support struts to thereby adjust the position of said feed relative to said reflectors wherein said adjusting comprises mounting an actuator to said boom arm and support struts.

69. (Cancelled)

70. (Currently Amended) The method of claim ~~69~~68 wherein said actuator is mounted to a top side of said boom arm.

71. (Currently Amended) The method of claim ~~69~~68 wherein said actuator is mounted to a bottom side of said boom arm.

72. (Cancelled)